

AMENDMENTS TO THE DRAWINGS

Amended sheets of the drawings are attached, indicating that the sheets are replacement sheets.

REMARKS

Drawings

Amended sheets of the drawings are attached, indicating that the sheets are replacement sheets.

Specification

The specification has been amended to include both metric and English units where appropriate.

Claim 2 was noted to lack antecedent basis and correction of the specification was requested. Applicant respectfully traverses this objection and requests that it be withdrawn. In paragraph [0019] of the specification, it states "The coating when applied becomes the external margin of the piston pin 10." This statement supplies the antecedent basis for the limitation of claim 2.

Claim Rejections

The noted objection to claim 15 has been corrected by amendment and it is requested that the rejection be withdrawn.

Claim Rejections Under 35 U.S.C. § 112

Claims 1-14 and 16-21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Claims 1, 8, and 15 have been amended in accordance with the examiner's comments and it is requested that the rejections be withdrawn.

Double Patenting

Claims 13 and 14 were objected to as being substantial duplicates. Applicant respectfully traverses this objection and requests that it be withdrawn. There are many processes for buffing. Being buffed in a centerless buffing operation is considerably more narrow than simply buffing.

Claims Rejections Under 35 U.S.C. § 102

Claims 1-7, 13, and 14 are rejected under 35 U.S.C. 102(b) as being anticipated by Komuro et al. (U.S. Patent No. 5,851,659). Applicant respectfully traverses this rejection and requests that it be withdrawn. Komuro deposits Cr-N, but is limited to a sliding member, principally a piston ring. There is no suggestion that the coating would work on a piston pin or that the pin bore in a connecting rod could be formed without a bushing or be uncoated. The rejection relies on Fig. 3 of Komura. Fig. 3 is actually a pitching test apparatus, as noted at Col 7, lines 42-44 of Komuro, and is therefore not a piston pin, as asserted in the rejection.

Claims 8 and 15 are rejected under 35 U.S.C. 102(b) as being anticipated by Lemelson (U.S. Patent No. 4,974,498). Applicant respectfully traverses this rejection and requests that it be withdrawn. In Lemelson, the entire outer surface (or select portions thereof) of the piston, piston pin, and connecting rod are coated with a synthetic diamond coating. Col 2, lines 46-53. In Col 5, lines 34-44, Lemelson suggests coating the entire outer surface of the connecting rod or coating the bearings or inserts at either or both ends of the connecting rod. Again, there is no suggestion that the coating would work on a piston pin or that the pin bore in a connecting rod could be formed without a bushing or be uncoated. Further, a synthetic diamond coating is distinct from a Cr-N coating.

Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Hamada et al. (U.S. Patent NO. 6,886,521). Applicant respectfully traverses this rejection and requests that it

be withdrawn. Hamada broadly defines sliding member to include a piston pin in the Abstract. In the Background section (col 1, lines 33-43), Hamada talks of coating cam lobes and lifters with chromium nitride. This is not extended to coating piston pins. There is no suggestion that the coating would work on a piston pin and in fact, by excluding piston pins from such coating, teaches away from the current application. Certainly there is no suggestion that the pin bore in a connecting rod could be formed without a bushing or be uncoated. The rejection relies on Fig. 1 of Hamada. Fig. 1 is actually a piston ring (Col 3, lines 24-26) and is not a piston pin, as asserted in the rejection.

Claim Rejections Under 35 U.S.C. § 103

Claims 9-12 and 16-19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson, and further in view of Komuro et al. Applicant respectfully traverses this rejection and requests that it be withdrawn. See the comments relating to both Lemelson and Komura above.

Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson, in view of Komuro et al. and further in view of Fukutome et al. (U.S. Patent No. 5,601,293). Applicant respectfully traverses this rejection and requests that it be withdrawn. See the comments relating to both Lemelson and Komura above. Further, Fukutome is limited to a coating on a piston ring. There is no structure, teaching, or suggestion in Fukutome of using the film of Fukutome on anything other than a piston ring.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Lemelson in view of Komuro et al. and Fukutome et al. and further in view of Wakefield (U.S. Patent No. 3,757,378). See the comments relating to Lemelson, Komura, and Fukutome above. Wakefield

is a centerless buffer. There is no structure, teaching, or suggestion in Wakefield of using the buffer of Wakefield on a piston pin.

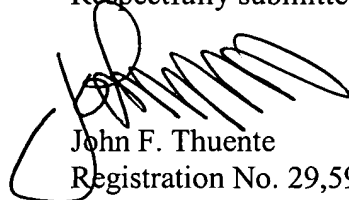
Conclusion

Claims 1-21 are pending. By this Amendment, claims 1, 2, 8, 9, 13, 15, 16, and 20 are amended.

In view of the foregoing, it is submitted that this application is in condition for allowance. Favorable consideration and prompt allowance of the application are respectfully requested.

The Examiner is invited to telephone the undersigned if the Examiner believes it would be useful to advance prosecution.

Respectfully submitted,



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